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AUTHOR Cieslak, Susan E.; Parmer, Patricia A.
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ABSTRACT

A study compared the effects of silent reading and oral reading on the comprehension scores of 15 second-grade and 14 third-grade low-ability reading students. The instruments used were selected from the Macmillan Series r program. First, students were introduced to new vocabulary from the teacher's manual for a particular reading selection. Next, the methods of reading each selection were varied in the following ways: oral reading by the students, oral reading to the class by the teacher, silent reading monitored by the teacher, and silent reading not monitored by the teacher. After each method, students were given a comprehension sheet to complete. Score percentages were charted, the means computed, and an analysis of variance was calculated. Results for the second grade indicated that monitored silent reading and oral reading by the teacher were superior methods for reading comprehension. For the third grade subjects, oral reading by the teacher was shown to be superior. Monitored silent reading resulted in the lowest scores. The results indicated that the teacher was the most effective and influential factor in the classroom for teaching reading comprehension. (HOD)

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The Effects of Silent Reading (Monitored and Unmonitored) and Oral Reading (by the Teacher and by the Student) on the Comprehension Scores of Low-Ability Second and Third Graders

Susan E. Cieslak and Patricia A. Parmer
Bowling Green State University

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This experimental study was conducted, using a four-method design, to test the effects of silent reading (monitored and unmonitored) and oral reading (by the teacher and by the students) on the comprehension scores of second and third grade low-ability reading students.

It was hypothesized that the students would perform better after reading orally.

After the students completed a reading selection from the Macmillan Series r text using one of the methods above, they were given a sentence completion worksheet from the series.

The scores (in the form of percentages) were charted, the means computed, and an analysis of variance was calculated. The Tukey's q method was used to test for significant differences in methods, in grade levels, and between methods and grade levels.

The researchers found that for the second grade, silent reading monitored and oral reading by the teacher were the superior methods. Oral reading by the teacher was the superior method for the third grade.

The hypothesis was rejected and they concluded that within the population studied, the teacher is the most effective and influential factor in the classroom for teaching reading comprehension.

INTRODUCTION

Statement of the Problem

The purpose of this study was to test the effectiveness of the methods of silent reading (monitored and not monitored by the teacher) and oral reading (by the teacher and by the students) with respect to the comprehension scores of second and third grade low-ability reading students.

Questions to be Answered

1. Is there a significant difference between the means of the comprehension scores for oral and silent reading methods?
2. Is there a significant difference in the comprehension scores between second and third grade low-ability reading students?
3. Does the monitoring of silent reading by the teacher have an effect on the comprehension scores?
4. Is there a significant difference in comprehension scores when the oral reading is performed by the teacher or the students?

Review of the Literature

Research studies have shown conflicting results in supporting the methods of oral and silent reading. Some have reported silent reading to be superior, others support oral reading, while some show no significant difference between the two methods.

Comprehension has become the most important goal, rather than just the fluent pronunciation of written words. Teachers are now concerned with the most effective method in achieving this goal, especially with low-ability students.

There are several characteristics that distinguish low-ability readers from their peers. Students must often deal with physical, emotional, environmental, and educational factors which contribute to reading difficulties. This study focused on some of the educational factors.

Stanovich (1982) stated that poor readers have deficits in strategic planning, phonological processing, and maintaining a code while reading. The inability to quickly form and maintain phonological codes may negatively affect the comprehension processes that depend on information and short-term memory. He found that low-ability readers showed inferior performance on short-term memory tasks which resulted from deficiencies in the ability to recode verbal stimuli and maintain those codes in short-term memory.

Salasoo (1986) concluded that a central cognitive basis is similar in both oral and silent reading. This study also showed that phonological recording was present in both modes of reading and may interact with text structure.

Stanovich (1982) also found that poor readers were less skilled in word decoding, comprehension at the inferential level, monitoring comprehension, text scanning, and the use of previously occurring contextual information to increase word recognition.

Miller and Smith (1985) named lack of automaticity in early developed reading skills and the reduced ability to focus attention as problems of poor readers.

Salasoo (1986) identified other variables to be checked: reading skill, the reader's motivation, the specific task, and the text difficulty.

Listening skills have been found to be directly related to reading comprehension ability. Stanovich (1982) reported that performance differences in listening comprehension by poor readers may be related to problems associated with complex syntactic structures. Many studies have shown that listening comprehension accounted for a larger proportion of reading variance at higher levels of reading skill.

Mosenthal (1976-1977) found that a common linguistic competence underlies both the silent reading and oral language processes, but is not shared by oral reading.

Juel and Holmes (1981) have suggested that the addition of the auditory modality in oral reading increases comprehension.

Dole, Harvey, and Feldman (1984-1985) stated that listening and reading both involve internal conceptualization of information and sequential processing of information in short-term memory. They used the Simon-Dole Listening Comprehension Test and concluded that this listening test does measure a child's language comprehension and predicts future reading comprehension. This emphasized the importance of listening skills for student learning, especially at the elementary level where much of the class instruction is communicated orally.

Many educators feel that the teacher is still the most influential factor in a classroom. Baumann (1984) recommended a five-step method for effectively teaching comprehension. In the direct instruction of a lesson, the teacher is actively involved in showing, telling, modeling, and demonstrating the skill to be learned. The teacher directs the lesson and the students are actively involved by

answering questions and working out the comprehension of the text, but the teacher is still in charge. He concluded that the spirit of the direct instruction strategy is what is most important, not the explicit nature of the five-step method that is recommended.

Several studies supported the belief that a valid difference does not exist in comprehension skills between oral and silent reading.

Stanovich (1982) stated that the poor readers are as likely as good readers to use contextual information in word recognition skills when given context they can understand.

Mosenthal (1976-1977) reported that miscuing in aural processing while a child is oral reading is similiar to miscuing while reading silently.

In a related study, Beebe (1980) tested to find how substitution miscues affected silent reading comprehension ability and the retelling ability following oral reading. Her results were as follows: corrections and acceptable miscues were important common predictors of reading comprehension and retelling ability; as the number of substitutions increased, the silent reading comprehension and oral retelling decreased; and as the number of acceptable and/or corrected miscues increased, so did comprehension. Her conclusions showed that teachers may only need to be concerned with oral reading errors that detract from comprehension and that the analysis of oral reading miscues is an effective way of diagnosing miscues that may occur during silent reading.

Salasoo (1986) reported no significant difference in the number of errors between oral or silent reading and no significant differ-

ences in the level of comprehension (literal and inferential) and the reading method. When all four levels were measured, oral and silent reading led to comparable comprehension.

Miller and Smith (1985) reported that repeated measures showed no direct effect to the test format whether it was read orally or silently and no difference between literal or inferential questions. It did show greater ease over silent or oral reading, but supported contentions of deficits in automaticity and attentional focus on poor readers. Low readers were better at inferential questions, but the overall comprehension levels were low for both types of questions and methods when compared to average and high achievers.

Juel and Holmes (1981) also reported that comprehension at the level of sentence understanding appeared to be equivalent following both oral and silent reading. They also found that in many reading methods textbooks the idea that silent reading produced more comprehension than in oral reading. They discussed the theory that by focusing attention on the pronunciation of words in oral reading, rather than relating the meanings of words on silent reading, comprehension decreased.

Salasoo (1986) hypothesized that vocalization in oral reading resulted in slower and less accurate comprehension performance. The slower speed of oral reading is accomplished by greater reliance on context rather than printed text, resulting in poor comprehension. When the text was difficult, she felt that the slower rate may have compensated for the faster encoding of text microstructure for comprehension when silent reading.

When reading actual text, Stanovich (1982) concluded that the

slow and inaccurate word-decoding processes of poor readers degraded the contextual information they received.

Rowell (1976) discussed that a child is faced with problems of pronunciation interpretation and intonation during oral reading. He also felt that many children find the mechanics of reading aloud so absorbing or so difficult that they are unable to attend to content.

In another study, Miller and Smith (1985) stated that oral reading is more demanding than silent reading. The reader is overtaxed and the ability to comprehend is limited. They hypothesized that the high and average readers would score better on silent reading, but found that they were equally strong in all areas. They also found that poor readers at the elementary level comprehended better during oral reading than silent reading. Poor readers also did better answering inferential questions than literal questions.

Rowell (1976) conducted a study testing sex, grade level, socioeconomic background, and population density. He found a significant difference in favor of oral comprehension scores for boys at all elementary levels. Urban students performed better than suburban students and third- and fifth-graders comprehended better after oral reading.

Salasoo (1986) found that students recognized statements faster during oral reading when the text was above grade level. The faster responses were due to vocalization during oral reading.

Juel and Holmes (1981) examined whether oral and silent sentence reading represent the same cognitive process and whether good and poor readers use different approaches to reading in the two modes.

The results show that poor readers decrease processing time on difficult words in silent reading as compared to oral reading.

Poor readers may benefit more from oral reading than good readers by hearing themselves read and from the constant concentrated attention that oral reading demands.

The studies above supporting oral reading are used as a basis for this study.

Hypothesis

The comprehension scores for oral reading performed by second and third grade low-ability reading students will be significantly higher than the comprehension scores for unmonitored silent reading, monitored silent reading, and oral reading by the teacher.

METHOD

Subjects

The subjects studied were 15 second grade and 14 third grade low-ability reading students selected from larger groups of sixty students at each grade level. The total population consists primarily of Caucasian middle-class students in Vermilion, Ohio. Students were selected for the low-ability group on the basis of the following criteria: a test score below 45 on the Gates-McGinite Reading Test, a comprehension score below 75% on the Silent and Oral Reading Inventories in the Macmillan reading text, and teacher observation and placement from the preceding year.

Instruments

The instruments used as a basis for this study were selected from the Macmillan Series r program, Copyright 1980. The 2-2 and 3-2 levels of the student texts were used. Students were given skills practice and workbook comprehension sheets consisting of 8 to 10 multiple-choice sentence completion items. These items were designed to demonstrate an understanding of a selection through literal comprehension, interpretive thinking, critical thinking, and creative thinking.

Procedure

An alternating four-method design was used as a whole class lesson for both grade levels. First, students were introduced new vocabulary from the teacher's manual for a particular reading selection. Next, the methods of reading each selection were varied in the following ways: oral reading by the students (ORS), oral reading to the class by the teacher (ORT), silent reading monitored by the teacher (SRM), and silent reading not monitored by the teacher (SRU).

Monitoring consisted of the teacher walking around the room checking the progress of the students' silent reading. During unmonitored silent reading the teacher did not focus her attention on the students, but rather on an activity such as grading papers.

During oral reading by the students, each was given a turn to read orally while the others followed along in their texts.

During oral reading by the teacher, students did not follow in their texts, but listened as the teacher read the selection orally.

After each method, students were given the comprehension sheet to complete. These were checked immediately by the teacher. Scores were calculated by percentage correct and recorded.

Methods were used in this order - SRM, ORS, SRU, ORT and four scores were taken for each method over an eight-week period. No other variables were changed during the reading class or included in this study.

Data Analysis

The means were calculated for each method of reading and for each student. A two-way analysis of variance was used to determine if a significant difference existed between each of the four methods, between Grade 2 and Grade 3, and the method x grade level.

After the resulting F ratios showed a significant difference for each of the above, the Tukey's q ratio for equal n's and unequal n's were used to find the specific significant differences between and within each grade level and method.

RESULTS

This study disproved the hypothesis that the comprehension scores would be significantly higher for oral reading performed by second and third grade low-ability students.

The means calculated for ORS were 85 for both second and third grade and did not show a significant difference which would identify it as the superior method. The means for each method and grade level are found in Table 1.

The resulting F ratios, listed in Table 2, showed a significant

difference between the means of each method, between grade levels, and between methods x grade level beyond the .01 level.

Using Tukey's q formula for equal n's, the two groups showed significant differences for the second grade. The differences existed between these groups: SRM - SRU and SRU - ORT at the .05 significance level.

One difference was calculated for the third grade between the methods SRM - ORT at the .01 significance level.

The interaction effect between grade levels and methods used showed a significant difference within the groups SRM_2 - SRM_3, SRU_2 - ORT_3, and ORT_2 - SRM_3 at the .01 significance level.

CONCLUSIONS

After reviewing the comprehension scores, several major conclusions were drawn by the researchers.

Results for the second grade indicated that during the period of time that the research was conducted, the superior methods for reading comprehension were silent reading monitored and oral reading by the teacher. These scores support the theory by Mosenthal (1976-1977) that the processes used for comprehension in silent reading and listening skills are similiar. The method with the lowest score was silent reading unmonitored. A possible reason for these results may be that when the teacher's direct attention is focused on the students, their performance improves. Another possibility is that the maturity level of second grade students varies when given independent, unmonitored assignments.

Results from the third grade indicated that during the period of

time that the research was conducted, the superior method for reading comprehension was oral reading by the teacher. The method with the lowest score was silent reading monitored. A possible reason for these results may be that the students' interest and listening skills are enhanced when the teacher presents a good model by reading expressively and correctly. Interestingly, the lowest comprehension score (SRM) possibly reflects the change from the previous classroom techniques. Silent reading prior to this study had taken place in a freer atmosphere. When that freedom was reduced, the students may have felt restricted or pressured and their performance reflected this.

The inconsistency of the comprehension scores between the grade levels for the methods of SRM and SRU are most likely due to a difference in: maturity levels of the students, the competence of the students to work independently, the change from normal classroom routine, and the difference in teaching styles.

One noticeable finding was that students scoring the lowest, did so on all four teaching methods. This proved true for both grade levels.

Although ORS was not found to be the superior method as hypothesized, the means of 85 for each grade level shows it to be an effective method for teaching comprehension. ORT was the superior method for this study. This leads the researchers to reflect on their students and classroom procedures. The belief that the strongest influence on the effectiveness of the methods used to develop comprehension skills depends upon each individual teacher.

RECOMMENDATIONS

If this study were to be replicated in the future, possible variables to consider for comparison would be differences in comprehension scores between the sexes, other grade levels, between average- and high-achieving students, and between literal and inferential questions.

Using this study with a larger sample of reading students would help to make the results more generalizable.

Table 1

Means and Standard Deviations on Reading Comprehension Scores for Teaching Methods and Grade Levels

Teaching Method	Grade 2	Grade 3
Silent Reading-Monitored		
Means	91	74
Standard Deviations	11.05	13.59
Silent Reading-Unmonitored		
Means	76	82
Standard Deviations	18.25	8.96
Oral Reading-Students		
Means	85	85
Standard Deviations	9.83	8.66
Oral Reading-Teacher		
Means	90	93
Standard Deviations	7.20	3.92

Table 2

Summary of ANOVA

Source of Variance	df	SS	MS	F
Methods	3	17,255	5,752	44.28*
Grades	1	20,400	20,400	157.03*
Methods x Grades	3	-31,962	10,654	82.01*
Within Groups	108	14,031	129.91	
Totals	115	19,724		

*Significant, $p < .01$

Table 3

The Tukey Method for Reading Comprehension Scores - Equal N's

SRM_2	SRU_2	ORS_2	ORT_2	SRM_3	SRU_3	ORS_3	ORT_3
$\overline{X}_1$=91	$\overline{X}_2$=76	$\overline{X}_3$=85	$\overline{X}_4$=90	$\overline{X}_5$=74	$\overline{X}_6$=82	$\overline{X}_7$=85	$\overline{X}_8$=93
N=15	N=15	N=15	N=15	N=14	N=14	N=14	N=14

MS_{WG}=129.91

df=108 k=8

SRM_2 - SRU_2	q = 5.10	Significant, $p<.05$
SRM_2 - ORS_2	q = 2.04	Not Significant, $p>.05$
SRM_2 - ORT_2	q = 0.34	Not Significant, $p>.05$
SRU_2 - ORS_2	q = 3.06	Not Significant, $p>.05$
SRU_2 - ORT_2	q = 4.76	Significant, $p<.05$
ORS_2 - ORT_2	q = 1.70	Not Significant, $p>.05$
SRM_3 - SRU_3	q = 2.62	Not Significant, $p>.05$
SRM_3 - ORS_3	q = 3.61	Not Significant, $p>.05$
SRM_3 - ORT_3	q = 6.23	Significant, $p<.01$
SRU_3 - ORS_3	q = 0.98	Not Significant, $p>.05$
SRU_3 - ORT_3	q = 3.61	Not Significant, $p>.05$
ORS_3 - ORT_3	q = 2.62	Not Significant, $p>.05$

Table 4

The Tukey Method for Reading Comprehension Scores - Unequal N's

SRM_2	SRU_2	ORS_2	ORT_2	SRM_3	SRU_3	ORS_3	ORT_3
$\overline{X}_1$=91	$\overline{X}_2$=76	$\overline{X}_3$=85	$\overline{X}_4$=90	$\overline{X}_5$=74	$\overline{X}_6$=82	$\overline{X}_7$=85	$\overline{X}_8$=93
N=15	N=15	N=15	N=15	N=14	N=14	N=14	N=14

MS_{WG}=129.91

df=108 k=8

SRM_2 - SRM_3	q = 5.69	Significant, $p<.01$
SRM_2 - SRU_3	q = 3.01	Not Significant, $p>.05$
SRM_2 - ORS_3	q = 2.01	Not Significant, $p>.05$
SRM_2 - ORT_3	q = 0.67	Not Significant, $p>.05$
SRU_2 - SRM_3	q = 0.67	Not Significant, $p>.05$
SRU_2 - SRU_3	q = 2.01	Not Significant, $p>.05$
SRU_2 - ORS_3	q = 3.01	Not Significant, $p>.05$
SRU_2 - ORT_3	q = 5.69	Significant, $p<.01$
ORS_2 - SRM_3	q = 3.68	Not Significant, $p>.05$
ORS_2 - SRU_3	q = 1.00	Not Significant, $p>.05$
ORS_2 - ORS_3	q = 0	Not Significant, $p>.05$
ORS_2 - ORT_3	q = 2.68	Not Significant, $p>.05$
ORT_2 - SRM_3	q = 5.35	Significant, $p<.01$
ORT_2 - SRU_3	q = 2.68	Not Significant, $p>.05$
ORT_2 - ORS_3	q = 1.67	Not Significant, $p>.05$
ORT_2 - ORT_3	q = 1.00	Not Significant, $p>.05$

Means for Reading Comprehension Scores Between Methods and Grade Levels

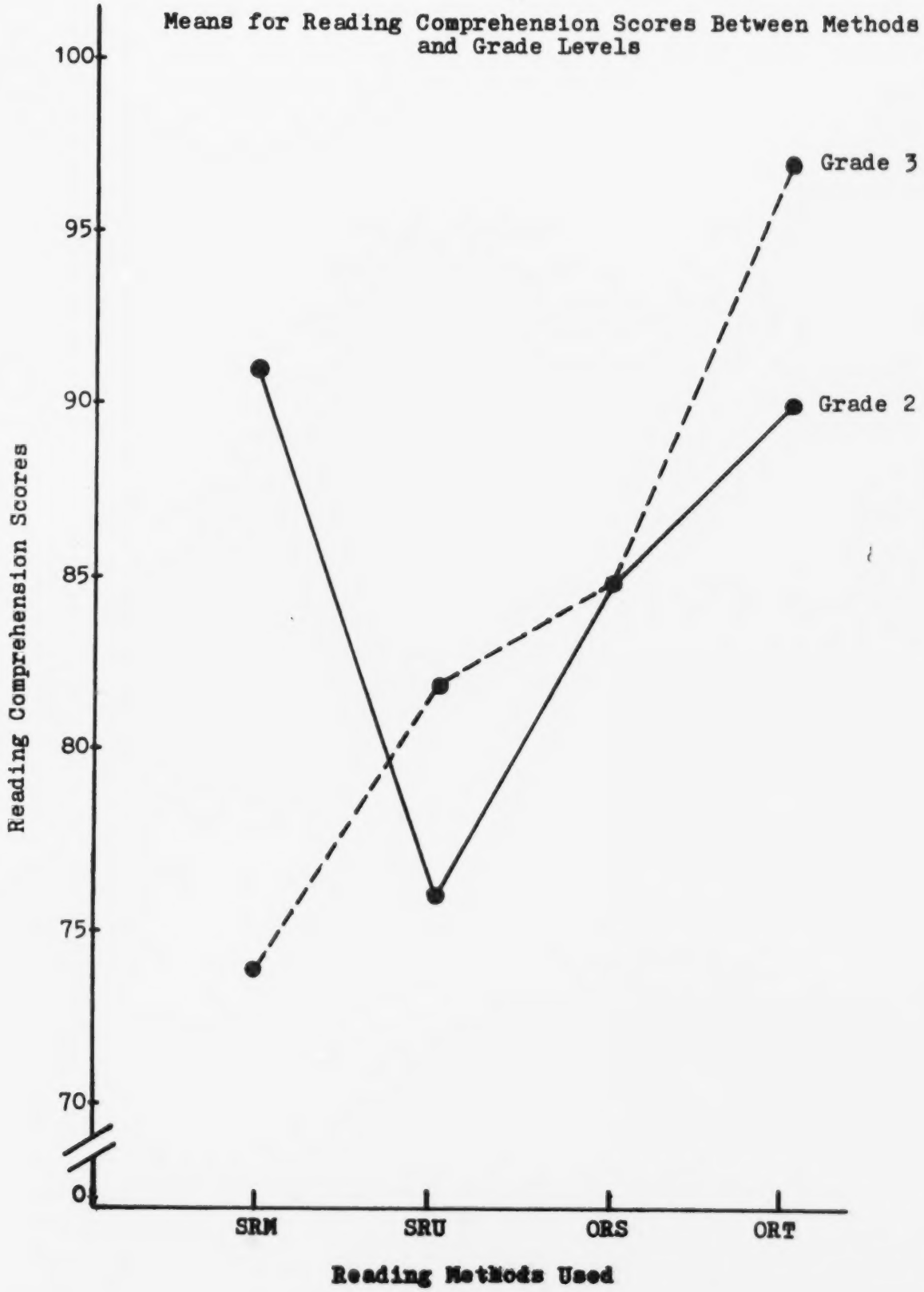

Figure 1

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